



5...4...3...2...1...

SPACE LAUNCH SYSTEM AT A GLANCE

The Biggest, Most Capable Rocket Ever Built
for Entirely New Human Exploration Missions
Beyond Earth's Orbit

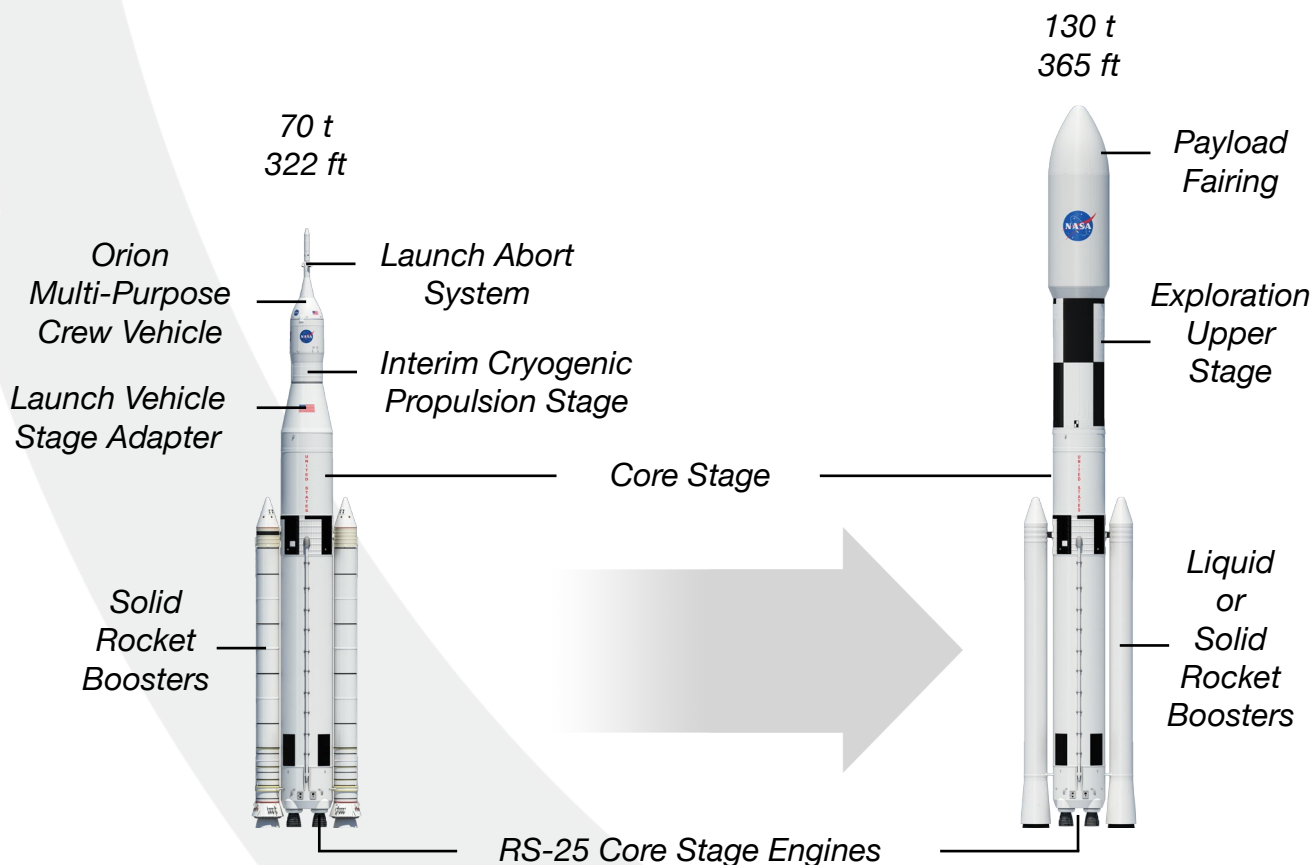
- **Designed to be flexible and evolvable for crew or cargo missions**
- **Safe, affordable and sustainable to advance America's exploration of space**

SLS Initial Lift Capability 70 metric tons

*More than double any operational vehicle today
(Crew Configuration Shown)*

SLS Evolved Lift Capability 130 metric tons

*More than any past, present or planned vehicle
(Cargo Configuration Shown)*



Liftoff Weights & Sizes

70 t

Weight: 5.75 million pounds

- Comparable to 8 fully-loaded 747 jets

Height: 322 feet

- Taller than the Statue of Liberty

Cargo Volume:

- 9,000 - 22,000 ft³



130 t

Weight: 7 - 7.5 million pounds

- Comparable to 10 fully-loaded 747 jets

Height: 365 feet

- Tall as a 30-story building

Cargo Volume:

- 58,000 ft³



Payload

70 t (154,000 pounds) to orbit

- 77 one-ton pickup trucks' worth of cargo
- Equivalent of 12 fully grown elephants

130 t (286,000 pounds) to orbit

- 143 one-ton pickup trucks' worth of cargo
- Equivalent of 22 fully grown elephants

Thrust/Power

At liftoff, the 70 t configuration has 8.4 million pounds of thrust, more than 31 times the total thrust of a 747 jet.

Produces horsepower equivalent to:

- 160,000 Corvette engines
- 13,400 locomotive engines

10 percent more thrust than the Saturn V at liftoff

At liftoff, the 130 t configuration has 9.2 million pounds of thrust, more than 34 times the total thrust of a 747 jet.

Produces horsepower equivalent to:

- 208,000 Corvette engines
- 17,400 locomotive engines

20 percent more thrust than the Saturn V at liftoff

Propulsion

Solid Rocket Boosters (SRBs)

- If their heat energy could be converted to electric power, the two SRBs firing for 2 minutes would produce 2.3 million kilowatt hours of power, enough to supply power to over 92,000 homes for a full day.
- Each burns 5 tons of propellant per second.

RS-25 Core Stage Engines

- The power generated by 4 RS-25 engines is equivalent to the output of 16 Hoover Dams.
- If 4 RS-25 engines pumped water, rather than fuel, they would drain a family-sized swimming pool in 20 seconds.
- 4 RS-25 engines generate power equivalent to 3,386,364 miles of residential street lights. That's a street long enough to go to the moon and back 7 times, then circle the earth 1½ times.

National Aeronautics and Space Administration

George C. Marshall Space Flight Center
Huntsville, AL 35812
www.nasa.gov/marshall

For more info:

www.nasa.gov/sls

www.nasa.gov

FS-2014-11-168-MSFC